

March 9th.

Vice President LEA in the Chair.

Twenty-eight members present.

The following papers were presented for publication in the Proceedings. "Prodromus Descriptionis Animalium Invertebratorum quæ in Expeditione ad Oceanum Pacificum Septentrionalem a Republicâ Federatâ missâ, Cadwalladaro Ringgold et Johanne Rodgers ducibus. observavit et descripsit W. Stimpson. Pars IV. Crustacea, Cancroidea et Corystoidea."

"Notice of Remains of Extinct Vertebrata, from the valley of the Niobrara River, collected during an expedition under the command of Lieut. G. K. Warren, U. S. Topographical Engineers, to explore the region of the Black Hills, by Dr. F. V. Hayden, Geologist to the Expedition, by Joseph Leidy, M. D."

Which were referred to committees.

Dr. Leidy, in presenting his paper intended for publication in the Proceedings, observed that it contained characteristic descriptions of twenty-eight species of extinct vertebrates, among which are six carnivora of the canine and feline families, two rodents, eight ruminants, eight solipeds, three large pachyderms, and one turtle. In relation to the eight solipeds, he stated they belonged to six genera: *Equus*, *Hipparion*, *Protohippus*, *Merychippus*, *Hypohippus*, and *Parahippus*. The two latter constitute with *Anchitherium* a distinct group; the three former constitute another group; and the fourth one is an intermediate form. The remains of *Equus*, indicating one species, are undistinguishable from the corresponding parts of the domestic horse.

Dr. L. further remarked, since he had had the opportunity of inspecting the numerous equine remains from the Niobrara, he was inclined to believe that the remains of the horse found in the post-pliocene deposits of the United States, indicate two species. Of these the remains of one are undistinguishable from corresponding parts of the recent horse, and are the representative of the *E. primigenius* of Europe, and may be distinguished by the name of *E. fraternus*. The other species relates to the *E. plicidens* of Europe, and like it is characterized by the comparatively complex arrangement of the enamel folding in the upper molar teeth. He had formerly named it *E. americanus*, but as this name had been previously applied to a South American species, he would now propose for it that of *E. complicatus*. The equine remains referred to, together with those of a small species of *Hipparion* from the post pliocene deposit near Charleston, S. C., and those of a species of *Anchitherium* from the miocene deposit of the Mauvaises Terres, Nebraska, appear to indicate the former existence of twelve species of seven genera of the family of solipeds in this country. From these facts it would appear as if the equine family was becoming extinct, as it is now represented by the sole genus *Equus*.

Dr. Hammond said the sections of jet he presented this evening were from a vein eighteen inches in thickness, at Cevolleta. Under the microscope they exhibited the woody structure very beautifully.

Mr. Lesley exhibited fragments of conglomerate, from under the coal, from the top of Blossburg Mountain, showing apparently the impression of a Calamite, which seemed to have marked or moulded even the pebbles themselves.

Mr. Lea was inclined to ascribe the marks upon the fragments exhibited, rather to the grooving or scratching of one rock by another after fracture, as seen in the slickensides.

Mr. Lesley had examined the locality for scratches, but had found no such fissure as that suggested by Mr. Lea, besides the beds at the spot are nearly horizontal.

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